

Test Report No. CANEC1826832801 Date: 11 Jan 2019 Page 1 of 7

CENTRA SCIENCE (HOLDINGS) LTD.

NO.7,NORTH ROAD 4TH VILLAGE,BAISHA HUMEN TOWN,DONGGUAN CITY,GUANGDONG CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as: Varistor

SGS Job No.: CP18-069184 - SZ

Model No.: CNR-14D471K

Client Ref. Info.: CNR-05D/V/P/H/C(180K~751K);CNR-07D/V/P/H/C(180K~821K);

CNR-10D/V/P/H/C(180K~182K);CNR-14D/V/P/H/C(180K~182K);

CNR-18D/V/P/H/C(180K~112K);CNR-20D/V/P/H/C(180K~182K)

Date of Sample Received: 26 Dec 2018

Testing Period: 26 Dec 2018 - 29 Dec 2018

Test Requested: Selected test(s) as requested by client.

Test Method: Please refer to next page(s).

Test Results: Please refer to next page(s).

Signed for and on behalf of SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Zm guan

Approved Signatory

Zuguan



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Test Report No. CANEC1826832801 Date: 11 Jan 2019 Page 2 of 7

Test Results:

Test Part Description:

Specimen No. SGS Sample ID Description SN1 CAN18-268328.001 Silvery metal(Semi-Product) SN₂ Blue body w/ black printing(Mixed) CAN18-268328.002

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = Method Detection Limit

(3) ND = Not Detected (< MDL)

(4) "-" = Not Regulated

Elementary Analysis, Flame Retardants & Phthalate(s)

Test Method: With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

| Test Item(s) | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>002</u> |
|----------------------------|--------------|-------------|------------|------------|
| Cadmium (Cd) | 100 | mg/kg | 2 | ND |
| Lead (Pb) | 1,000 | mg/kg | 2 | 22 |
| Mercury (Hg) | 1,000 | mg/kg | 2 | ND |
| Hexavalent Chromium (CrVI) | 1,000 | mg/kg | 8 | ND |
| Sum of PBBs | 1,000 | mg/kg | - | ND |
| Monobromobiphenyl | - | mg/kg | 5 | ND |
| Dibromobiphenyl | - | mg/kg | 5 | ND |
| Tribromobiphenyl | - | mg/kg | 5 | ND |
| Tetrabromobiphenyl | - | mg/kg | 5 | ND |
| Pentabromobiphenyl | - | mg/kg | 5 | ND |
| Hexabromobiphenyl | - | mg/kg | 5 | ND |
| Heptabromobiphenyl | - | mg/kg | 5 | ND |
| Octabromobiphenyl | - | mg/kg | 5 | ND |
| Nonabromobiphenyl | - | mg/kg | 5 | ND |
| Decabromobiphenyl | - | mg/kg | 5 | ND |
| Sum of PBDEs | 1,000 | mg/kg | - | ND |
| Monobromodiphenyl ether | - | mg/kg | 5 | ND |
| Dibromodiphenyl ether | - | mg/kg | 5 | ND |
| Tribromodiphenyl ether | - | mg/kg | 5 | ND |
| Tetrabromodiphenyl ether | - | mg/kg | 5 | ND |



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| Test Report | No. CANEC18268328 | 301 | Date: 11 Jan 2019 | | ate: 11 Jan 2019 Page 3 of 7 | |
|-------------------------------------|-------------------|-------------|-------------------|------------|------------------------------|--|
| Test Item(s) | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>002</u> | | |
| Pentabromodiphenyl ether | - | mg/kg | 5 | ND | | |
| Hexabromodiphenyl ether | - | mg/kg | 5 | ND | | |
| Heptabromodiphenyl ether | - | mg/kg | 5 | ND | | |
| Octabromodiphenyl ether | - | mg/kg | 5 | ND | | |
| Nonabromodiphenyl ether | - | mg/kg | 5 | ND | | |
| Decabromodiphenyl ether | - | mg/kg | 5 | ND | | |
| Dibutyl phthalate (DBP) | 1,000 | mg/kg | 50 | ND | | |
| Butyl benzyl phthalate (BBP) | 1,000 | mg/kg | 50 | ND | | |
| Bis (2-ethylhexyl) phthalate (DEHP) | 1,000 | mg/kg | 50 | ND | | |
| Diisobutyl Phthalates (DIBP) | 1,000 | mg/kg | 50 | ND | | |

Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.IEC 62321 series is equivalent to EN 62321 series

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Elementary Analysis

Test Method: With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis .

| Test Item(s) | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|-------------------------------|--------------|-------------|------------|------------|
| Cadmium (Cd) | 100 | mg/kg | 2 | ND |
| Lead (Pb) | 1,000 | mg/kg | 2 | ND |
| Mercury (Hg) | 1,000 | mg/kg | 2 | ND |
| Hexavalent Chromium (Cr(VI))▼ | - | µg/cm² | 0.10 | ND |

Notes:

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

IEC 62321 series is equivalent to EN 62321 series

http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::::FSP_ORG_ID,FSP_LANG_ID:125863 7.25

- (2) ▼= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 - b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 - c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive unavoidable coating variations may influence the determination

Information on storage conditions and production date of the tested sample is unavailable



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No. CANEC1826832801

Date: 11 Jan 2019 Page 4 of 7

and thus Cr(VI) results represent status of the sample at the time of testing.

Remark: The sample(s) of 002 was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value and only for reference.



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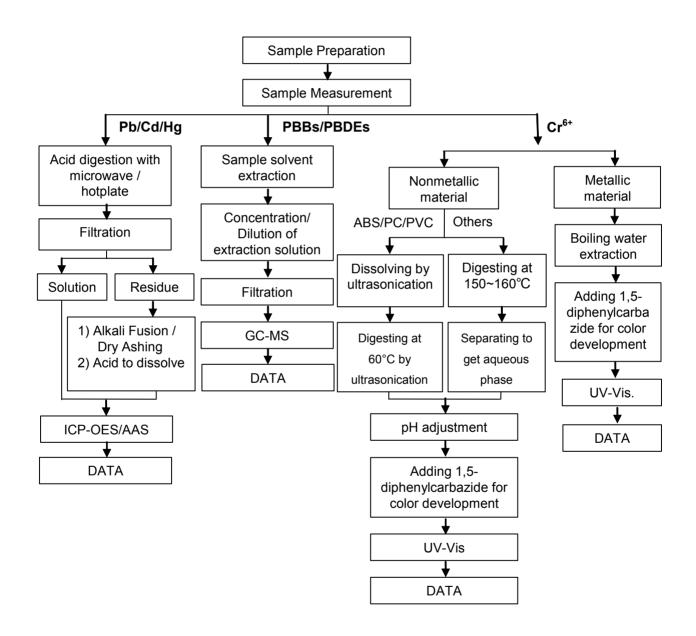
Page 5 of 7

Date: 11 Jan 2019

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Pb/Cd/Hg/Cr6+/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr6+ and PBBs/PBDEs test method excluded).





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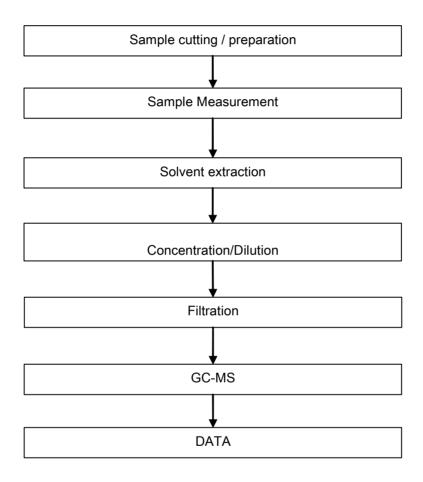
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Page 6 of 7

Date: 11 Jan 2019

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Phthalates Testing Flow Chart





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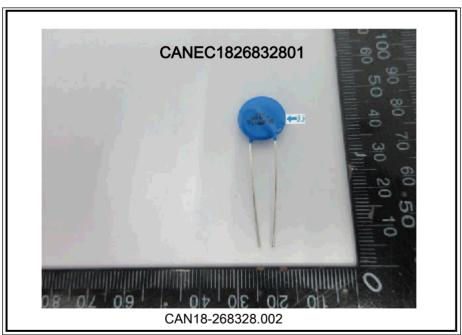
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Page 7 of 7

Date: 11 Jan 2019

Sample photo:





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